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ABSTRACT

This study examined language and reading ability in English monolinguals, Spanish monolinguals, and two bilingual groups at the beginning of kindergarten and at the beginning of first grade. The study also compared the family background of the children on home literacy, parent education, and the parents' aspirations for their children. In addition, the children in the study were assessed for general cognitive ability. Results indicated that only the English and Spanish monolingual students differed in home background, with English monolinguals having higher levels of parental education and more traditional literacy activities in the home. In general, students did not differ in basic cognitive functioning or parental expectations. Bilingual children were better than their monolingual peers in both semantic functioning and communicative competence when tested in their dominant language. The research has implications for educational psychologists and classroom teachers. (Author/MSE)

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BEGINNING TO READ AMONG MONOLINGUAL AND BILINGUAL CHILDREN

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Abstract

This study examined language and reading ability in English monolinguals, Spanish monolinguals, and two bilingual groups at the beginning of kindergarten and at the beginning of first grade. This study also compared the family background of the children on home literacy, parent education and the parents' aspirations for their children. In addition, the children in the study were assessed for general cognitive ability. Results indicated that only English monolingual and Spanish monolingual students differed in home background, with English monolinguals having higher levels of parental education and more traditional literacy activities in the home. Students did not differ, in general, in terms of basic cognitive functioning or parental expectations. Bilingual children were better than their monolingual peers in both semantic functioning and communicative competence when tested in their dominant language. This research has implications for educational psychologists and classroom teachers.

Educators and researchers have long debated the special educational needs of young bilingual children. However, children who have been identified as "bilingual" have not generally had equal proficiency in both languages. Instead, bilingual children have shown stronger skills in either their first or their second language (Carrow, 1971).

Bilingual children also differ in terms of which language they seem to prefer for input (i.e., language receptivity) or output (i.e., language production). Some researchers have concluded that bilingual children's language dominance and language preference are due to exposure to each language, the social desirability of each language, and usages of each language within a particular social/cultural/linguistic environment (Garcia & Flores, 1986).

These differences in language dominance and preference are important for adequately assessing the language abilities of bilingual children, and for designing and implementing appropriate educational programs. The appropriate assessment of language skills is also important for the determination of individual readiness for reading instruction and instruction in other scholastic content areas.

This study was concerned with the above issues, and compared Spanish-English bilingual children with English and Spanish monolinguals in a variety of language and reading tasks. An emphasis of the study was on measuring progress in language and reading proficiency, from kindergarten to first grade, in both languages. The comparison of bilingual children with both English and Spanish monolingual children

permitted a more comprehensive basis for assessing the language skills of the bilingual children. Finally, the study examined the role of instructional factors, cognitive abilities, and home background factors (e.g., home literacy, parent education, etc.), in producing learning outcomes. The study therefore permitted an examination of the variety of influences--individual, school-based, and home-based--that affect language and scholastic growth and development. It was generally hypothesized that achievement gains would reflect developmental differences in the formal vs. social areas of language development, and that bilingual students would have higher performance in their dominant language.

Methodology

Subjects

Ninety children (mean age = 5 years, 8 months), with a nearly equal mixture of males (n = 44) and females (n = 46), were randomly selected from the kindergarten classes in an urban public school. The sample, and the school's student body, were primarily comprised of low-income Hispanics (Mexican Americans).

The sample consisted of three randomly selected groups: 30 English-only subjects (English monolinguals), 30 Spanish-only subjects (Spanish monolinguals), and 30 bilinguals (22 were Spanish dominant; 8 were English dominant). Language classification was based on the results of the IDEA Language Proficiency Test which was administered to all children in the school at the beginning of kindergarten. On the basis of these test results, students were placed in classrooms where English (for English-only and English-dominant-bilinguals) or Spanish

(for Spanish-only and Spanish-dominant-bilinguals) was the main medium of communication and instruction. Due to subject attrition and missing data, the final sample of subjects for the purposes of data analysis consisted of 71 students (23 Spanish-only, 22 English-only, and 26 bilinguals; 19 of the 26 bilinguals were Spanish-dominant).

Materials

Achievement Measures. Depending on the language classification of the students, the English and/or Spanish versions of the Woodcock-Johnson Psycho-Educational Battery (Woodcock & Johnson, 1977) were administered (bilingual children were administered both versions). The English version of the Woodcock-Johnson contains three sections, each with a different set of subtests: (1) Tests of Cognitive Ability; (2) Tests of Achievement, and (3) Tests of Interest. The Spanish version of the test (Woodcock, 1981, 1982) contains only the Tests of Cognitive Ability and the Tests of Achievement. For the current investigation, the subtests that were used were those focusing on Oral Language (picture vocabulary, antonyms/ synonyms, analogies), Reading (letter-word identification, word attack, and passage comprehension), and Reading Aptitude (linguistic and verbal processing skills, including visual-verbal integration, auditory synthesis, vocabulary comprehension, conceptualization, and expression).

In summary, the Oral Language cluster provided an even balance of subtests for evaluating the semantic aspects of receptive and expressive language skills; the Reading cluster examined basic reading ability emphasizing word recognition skills; and the Reading Aptitude cluster was more exclusively a measure of verbal processing.

Cognitive Ability. Subjects in each of the language groups were tested on the Raven's Coloured Progressive Matrices Test (Raven, Court, & Raven, 1976). This instrument served as a general measure of nonverbal cognitive ability.

Home Background. A Parent Literacy Questionnaire was developed to examine four aspects of family life: (1) home language; (2) home literacy (the 7 items, with a Cronbach's alpha of .79, assessed family reading habits and availability of reading materials); (3) parental aspirations for their children (i.e., the number of years of schooling they hoped their child would complete); and (4) community involvement. In addition, the questionnaire included a measure of parental education (average years of education for mother and father). The Questionnaire was prepared and administered in Spanish or English, depending on the preferences of the responding parent. Completed questionnaires were obtained from 89 of the 90 parents originally included in the study.

Procedures

Children were administered the Woodcock-Johnson subtests two months after the beginning of kindergarten (the pretest), and again at the beginning of first grade (the posttest). Each student was individually tested by trained, regular school personnel. The pretest was administered to monolingual students in their own language; bilingual students were tested in both languages. The Raven's Test was administered, by school personnel, prior to the second administration of the Woodcock-Johnson subtests. The posttest on the Woodcock-Johnson batteries was given only in English to the children who were initially classified as monolingual English speakers. However, the

children who were initially classified as monolingual Spanish were given both the English and the Spanish subtests.

The Parent Literacy Questionnaire was administered to the parents (usually the mother) when they escorted their child to the test site for the pretest of the Woodcock Johnson tests. Parents either completed the questionnaire alone, or with the assistance of school personnel who read the questions and recorded their responses.

Results

Analyses of the data yielded a number of interesting patterns. In this report we present the salient findings that have direct application to practitioners (interested readers may refer to Padilla, Valadez, & Chang, 1988, for a more technical treatment of this study).

Background Variables

The base line data obtained on non-verbal cognitive ability, as measured by the Raven's Progressive Matrices, showed that in kindergarten, the four groups of children were all starting out fairly evenly matched (Table 1). Whether initially classified as English-only (monolingual English), Spanish-only (monolingual Spanish), English-dominant bilingual, or Spanish-dominant bilingual, no one group was appreciably higher or lower than another in general cognitive ability.

On the Home Literacy Scale, the English-only children obtained higher scores than Spanish-only subjects. Similarly, parents in the English-only group had more years of schooling than parents of Spanish-only students. Scores for the Spanish-only group on the Home Literacy

Table 1

Means and Standard Deviations of Background Variables

Group[a]		Raven's Matrices	Home literacy Scale	Parents' Schooling
English-only	*M*	15.5	14.4[b]	9.9[b]
	SD	4.0	6.4	3.4
Spanish-only		14.2	7.0[c]	6.8
		3.0	3.8	2.4
English-dominant		14.4	13.7	8.9
		2.6	5.3	2.0
Spanish-dominant		16.7	10.9	8.6
		4.1	4.8	3.5

[a] n = 22 for English-only, n = 23 for Spanish-only, n = 7 for English-dominant, n = 19 for Spanish-dominant.
[b] Significantly different ($p < .05$) from Spanish-only group.
[c] Significantly different ($p < .05$) from English-dominant group.

Scale were also lower than those for the English-dominant bilinguals, but not for the Spanish-dominant bilinguals. No differences in Home Background variables were observed between the two bilingual groups or between the bilingual groups and the English-only group. There were also no differences in parental expectation towards the academic attainment of their children.

Language and Literacy Development

Scores on the Woodcock-Johnson Battery were examined from several perspectives addressing language and literacy development. Initial scores (pretest) were compared across groups. Subsequently, by studying the scores obtained after one year of schooling (posttest), comparisons were made on the gain scores. Table 2 contains the group results of the Woodcock Johnson Test (both pre- and posttest results) when administered in Spanish. Table 3 displays the resultant group scores for the tests given in English.

English-Dominant Bilingual Subjects

In comparing the test scores in Spanish and English, no significant differences were found except at the beginning of kindergarten (where the mean reading score in Spanish was higher than the mean reading score in English, although these children had been classified by the school as English-dominant). However, after one year of instruction, they had greater gains in English Reading than in Spanish reading Spanish Reading. In fact, for these students the difference between English Reading at the beginning of first grade and English Reading at the beginning of kindergarten was almost twice as great as

Table 2

Means and Standard Deviations of Spanish Woodcock-Johnson

Group[a]		Prescores: Oral Language	Prescores: Reading	Prescores: Reading Aptitude
Spanish-only	M	446.8	417.0	444.7
	SD	9.6	4.9	7.4
Spanish-dominant		443.7	416.1	445.2
		9.4	5.1	7.1
English-dominant		442.9	411.7[b]	449.4
		13.5	3.8	6.5
		Postscores		
Spanish-only		462.0	428.2	461.5
		10.6	12.1	11.5
Spanish-dominant		463.1	429.6	464.5
		10.5	7.9	10.3
English-dominant		447.3[b]	421.4[c]	463.1
		18.7	11.4	4.8

[a] n = 23 for Spanish-only, n = 19 for Spanish-dominant, n = 7 for English-dominant.
[b] Significantly different ($p < .05$) from Spanish-only and Spanish-dominant.
[c] Significantly different ($p < .05$) from Spanish-dominant.

Table 3

Means and Standard Deviations of English Woodcock-Johnson

Group[a]		Prescores: Oral Language	Prescores: Reading	Prescores: Reading Aptitude
English-only	M	436.5	396.1	440.3
	SD	17.3	16.7	15.4
English-dominant		440.1	399.9	446.6
		7.7	5.4	9.5
Spanish-dominant		422.3[b]	394.6	438.1[c]
		13.7	8.9	8.0
		Postscores		
English-only		455.5	414.5	464.1
		17.8	15.9	31.4
English-dominant		457.0	418.3	464.7
		4.1	22.7	5.2
Spanish-dominant		436.8[b]	402.3[b]	453.7[c]
		11.4	12.5	10.1
Spanish-only		412.8[d]	385.6[e]	436.8
		16.3	17.1	24.4

[a] n = 22 for English-only, n = 7 for English-dominant, n = 19 for Spanish-dominant, n = 23 for Spanish-only.
[b] Significantly different ($p < .05$) from English-only and English-dominant.
[c] Significantly different ($p < .05$) from English-dominant.
[d] Significantly different ($p < .05$) from prescores of English-only and English-dominant.
[e] Significantly different ($p < .05$) from prescores of English-only and bilingual groups.

the mean gain score in Spanish Reading, reflecting the effect of the language of instruction (English). At the same time, no statistically significant increase in Spanish Oral Language occurred between the two testing dates. However, increases were evident in the Spanish Reading and Spanish Reading Aptitude scores and in all of the English scores. Consequently, similar increases or gains were made by the subjects in both languages in all areas except on Oral Language.

Spanish-Dominant Bilingual Subjects

Statistically noticeable increases were made by these subjects in all areas tested, and these increases were similar in both the Spanish and English versions of the Woodcock-Johnson. But, the Spanish scores on the Woodcock-Johnson were higher than the English scores at the beginning of kindergarten as well as in the beginning of first grade.

English-Testing. In the English version of the Woodcock-Johnson, there were no significant differences between the two bilingual groups in the gain scores from the pretest to posttest. There were also no differences when the two groups were compared with the English-only students. Differences did emerge when each area was examined separately at each testing period. In particular, at the beginning of first grade, English-dominant students obtained higher scores than Spanish-dominant subjects in all of the areas tested. In kindergarten, English-dominant students had higher scores only in Oral Language and Reading Aptitude. Test performance in English Reading at the beginning of kindergarten was virtually equivalent for both groups. At the same time, the Spanish-dominant subjects also obtained lower scores than the English-only subjects on Oral Language at both the pretest and posttest

and on Reading at the beginning of first grade. No statistical differences between the English-dominant and English-only subjects were found.

Spanish-testing. No differences were found in the improvement or gain scores of the Spanish Woodcock-Johnson when the two bilingual groups were compared with the Spanish-only subjects. The Spanish-only subjects, however, obtained higher scores than English-dominant subjects on the Spanish Reading pretest score and the Oral Language posttest score. The statistical analysis showed no differences between the Spanish-dominant subjects and the Spanish-only subjects on all the Woodcock-Johnson measures.

Comparing the two bilingual groups alone revealed greater improvement over time on Spanish Oral Language by the Spanish-dominant subjects; consequently, the Spanish-dominant subjects obtained higher scores than the English-dominant subjects on Spanish Oral Language at the beginning of first grade. The Spanish-dominant subjects also obtained higher scores than the English-dominant subjects on the Spanish Reading score at the beginning of kindergarten and again in first grade.

Discussion

It was predicted that students would perform better in their dominant language. Some support for this hypothesis was found and reported. Spanish-dominant subjects, for example, obtained higher scores in the Reading and Reading Aptitude clusters when they were tested in Spanish than when they were tested in English. In fact, Spanish-dominant subjects had somewhat higher scores than the Spanish-

only students on each of the three measures. Similarly, English-dominant subjects also demonstrated their greater proficiency in English by reaching performance levels that were comparable, or better than, those of the English-only students.

Performance on the Woodcock-Johnson is best in the language in which the bilingual child is more dominant. Specifically, the performance of bilingual children is similar to that of the monolingual group if the language of testing represents the students' dominant language. In identifying language dominance patterns, however, the present results support the notion that Oral Language competence is an essential element of language proficiency (Barona, 1986; Garcia & Gonzalez, 1984) and must be considered, in addition to semantic functioning (i.e., reading and reading aptitude), in formal assessments. That is, the measurement of Oral Language skills becomes necessary because a child's skills in the less dominant language may be seen as not functional in an environment as formal as a classroom, but may be adequate for social interactions in everyday activities (McLaughlin, 1982). Consequently, understanding these different aspects of language is important for understanding the group differences in reading fluency.

For this reason, research in language proficiency must adopt a developmental basis for the acquisition of both communicative competence and appropriate semantic functioning. Both of these language areas must be seen as continuously emerging while, at the same time, following different paths of development. This point is especially important when looking at second language acquisition (Valadez-Love, 1976). For example, group differences in the semantic

aspect of language were not necessarily associated with group differences in communicative competence. In addition, movement towards communicative competence may occur earlier than advanced semantic functioning because the former is intimately tied to social aspects of everyday activities, and is therefore more likely to be self-initiated (Fillmore, 1975). Semantic functioning, in contrast, develops more as a result of specific instructional attention.

The present study suggests that semantic development is related to skilled early reading in bilinguals and second language learners (Hall, White & Guthrie, 1986). Research efforts should therefore be directed at understanding vocabulary growth and semantic development in bilinguals and second language learners, especially during the elementary years when formal instruction in language and reading begins.

Further support for this research initiative is provided by experimental data on the vocabulary/reading relationship among monolinguals. For example, vocabulary instruction has been shown to improve reading ability (Beck, Perfetti, & McKeown, 1982), and studies manipulating word familiarity showed that vocabulary difficulty influences reading ability directly (Freebody & Anderson, 1983; Wittrock, Marks & Doctorow, 1975). This general finding is consistent with Shuy's (1968, 1986) recommendation that the future of reading research will need to be at the levels of word meaning and function (i.e., communicative competence). Shuy's model of how different areas of language influence reading is also useful as a starting point for further investigation. The model suggests that the different areas of language:

> "...are not discrete but operate simultaneously, in different relations to each other at various points in development. The reader varies the intensity of his [or her] focus on each area at various stages, but uses all of them at all times" (Shuy, 1986, p. 86).

In this way, a developmental approach to understanding the relationship between language skills and reading ability should provide new information about literacy in bilinguals and second language learners.

Finally, home background factors, such as parental education and the salience of literacy in the home, may have some bearing on the achievement gains of young children, especially Spanish-speaking monolinguals and bilinguals.

From a more pragmatic point of view, the research summarized in this report underscores the uniqueness of students who differ in their language proficiencies. In particular, it provides a solid demonstration that students may receive lower achievement test scores simply because the test is in "the wrong language." Educators must therefore be cautious in interpreting test results for students who differ in language background.

Educators of young children should recognize the varied manner in which language and reading develops: social language development frequently precedes the development of more formalized language skills. Teachers can capitalize on this feature of language development by incorporating curricular strategies that emphasize functional language development prior to the introduction of teaching on the more formal rules of syntactical structure, of grammar.

It was also interesting to witness the relative precocity of the bilingual students in comparison to their monolingual counterparts. This finding, supports the notion that bilingualism offers certain cognitive benefits to students (cf. Cummins, 1987; Lindholm & Fairchild, 1989; Padilla & Lindholm, 1984). Perhaps more concerted efforts in bilingual education would have the beneficial effect of enhancing the academic performances of all students.

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Authors' Notes

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